

## WHAT IS CLAIMED IS:

1. A laser beam projector comprising:  
an optical head of projecting a laser beam; and  
a holding-turning mechanism of holding and turning the  
optical head.
2. The laser beam projector according to claim 1,  
wherein the holding-turning mechanism holds the optical head  
so that the optical head is able to turn about an axis passing  
a center of gravity of the optical head.
3. The laser beam projector according to claim 1,  
wherein the holding-turning mechanism includes a first  
holding-turning unit of turning the optical head in a  
direction perpendicular to a weld line and a second  
holding-turning unit of turning the optical head in a  
direction of the weld line.
4. The laser beam projector according to claim 2,  
wherein the holding-turning mechanism includes a first  
holding-turning unit of turning the optical head in a  
direction perpendicular to a weld line and a second  
holding-turning unit of turning the optical head in a  
direction of the weld line.
5. The laser beam projector according to claim 1,  
wherein the holding-turning mechanism includes a turning link  
mechanism of transmitting a driving force to the optical head  
in order to turn the optical head.
6. The laser beam projector according to claim 2,  
wherein the holding-turning mechanism includes a turning link  
mechanism of transmitting a driving force to the optical head  
in order to turn the optical head.
7. The laser beam projector according to claim 3,  
wherein the holding-turning mechanism includes a turning link  
mechanism of transmitting a driving force to the optical head  
in order to turn the optical head.
8. The laser beam projector according to claim 4,  
wherein the holding-turning mechanism includes a turning link  
mechanism of transmitting a driving force to the optical head  
in order to turn the optical head.

9. The laser beam projector according to claim 1, wherein the optical head emits a YAG laser beam.

10. A robot comprising:

an robot arm; and

a laser beam projector attached to the robot arm, the laser beam projector including an optical head of projecting a laser beam and a holding-turning mechanism of holding and turning the optical head.

11. The robot according to claim 10, wherein the holding-turning mechanism holds the optical head so that the optical head is able to turn about an axis passing a center of gravity of the optical head.

12. The robot according to claim 10, wherein the holding-turning mechanism includes a first holding-turning unit of turning the optical head in a direction perpendicular to a weld line and a second holding-turning unit of turning the optical head in a direction of the weld line.

13. The robot according to claim 11, wherein the holding-turning mechanism includes a first holding-turning unit of turning the optical head in a direction perpendicular to a weld line and a second holding-turning unit of turning the optical head in a direction of the weld line.

14. The robot according to claim 10, wherein the holding-turning mechanism includes a turning link mechanism of transmitting a driving force to the optical head in order to turn the optical head.

15. The robot according to claim 11, wherein the holding-turning mechanism includes a turning link mechanism of transmitting a driving force to the optical head in order to turn the optical head.

16. The robot according to claim 12, wherein the holding-turning mechanism includes a turning link mechanism of transmitting a driving force to the optical head in order to turn the optical head.

17. The robot according to claim 13, wherein the holding-turning mechanism includes a turning link mechanism of transmitting a driving force to the optical head in order

to turn the optical head.

18. The robot according to claim 10, wherein the optical head emits a YAG laser beam.